PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte Niehoff

Appeal No. _____

Serial No.:	**09/307,633**
Filed:	**May 7, 1999**
Group Art Unit:	**3763**
Examiner:	**J. Maynard**
Applicant:	**Niehoff**
Title:	**CONTROLLING PLUNGER DRIVES FOR FLUID INJECTIONS IN ANIMALS**

Cincinnati, Ohio 45202

August 28, 2006
Via EFS-WEB

APPEAL REPLY BRIEF

This reply brief is in response to Examiner's Answer mailed July 28, 2006, and is filed to address the following new issues raised by the Examiner's Answer:

1. The Examiner's acknowledgment that only the dictionary definition of "content" is being relied upon in interpreting the meaning of that term in the Reilly '858 reference.

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/Thomas W. Humphrey/ August 28, 2006
Thomas W. Humphrey Date
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2. The Examiner's assertion that the "indicating mechanism" 76 shown in Reilly '858, Fig. 6, constitute "indicia [which] indicates the presence of liquid, and thereby indicates a volume of liquid present in the syringe."

3. The Examiner's citation of the text at col. 6, lines 45- 47 of Reilly '858, for the proposition that "the indicia could include dimension of the syringe ... from which content of the syringe is determined."

4. The Examiner's assertion regarding Fenton, that "the position of the connector, as well as the size of the syringe to determine the rate of the plunger travel" are relevant to the claimed invention.

5. The Examiner's assertion that "Hyde '175 discloses that the volume of a syringe is indicated via communication with physical indicia on a syringe", citing text at col. 5 lines 9-11 of Hyde.

1. Meaning of "Content" in Reilly '858

The Examiner's use of a dictionary as the sole authority to interpret "content", or any other term in a prior art patent, is clearly inappropriate. The Federal Circuit has repeatedly held that the specification is the first and primary guide for determining the meaning of terms in an issued patent. Specifically, the Federal Circuit has held that the specification "acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication". Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). The use of a general purpose dictionary to interpret a patent specification has been repeatedly

criticized by the Federal Circuit, most recently in the en banc decision in Philips v. AWH Corp., 415 F. 3rd 1303, 1321 (Fed. Cir., 2005), which held

> Dictionaries, by their nature, provide an expansive array of definitions. General dictionaries, in particular, strive to collect all uses of particular words, from the common to the obscure. By design, general dictionaries collect the definitions of a term as used not only in a particular art field, but in many different settings. In such circumstances, it is inevitable that the multiple dictionary definitions for a term will extend beyond the 'construction of the patent [that] is confirmed by the avowed understanding of the patentee, expressed by him, or on his behalf, when his application for the original patent was pending."

In Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477-8 (Fed. Cir. 1998), the Federal Circuit rejected a patent owner's attempt to use a dictionary definition (cited during prosecution of the patent) to broaden the word "degradable" to include definitions found in the dictionary that were not applicable to the specification, holding:

> When the meaning of a term is sufficiently clear in the patent specification, that meaning shall apply. [citations omitted] This rule of construction recognizes that the inventor may have imparted a special meaning to a term in order to convey a character or property or nuance relevant to the particular invention.

Had the Examiner followed the Federal Circuit's guidelines, and looked to the use of "content" in the specification of the '858 patent, it would be clear that the particular definition the Examiner has selected from his dictionary is inappropriate.

The statement at issue here, appears in Reilly '858 at col. 6, lines 47-48: "[e]xamples of information which could be encoded on the encoding device 70 include ... content of the syringe in the case of a pre-filled syringe." As noted in Applicant's opening brief, the reference to "the case of a pre-filled syringe" clarifies that "content" means here – it is

referring to the type or nature of fluid in the syringe, not to the amount of fluid, as the Examiner supposes.

The proper meaning of "content" can further be seen from the three other uses of that word in the '858 patent. In the paragraph immediately following the disputed statement, the '858 patent states "the syringe 22 is being used in this embodiment without a pressure jacket, for strength and visibility of the syringe contents ..." (col. 6 lines 66-68). Also, further into the '858 patent, there is a statement that "[e]limination of a pressure jacket also is desirable from the standpoint of better visibility of the contents of the syringe 22, better heat transfer to the syringe contents and decreased cleaning and maintenance otherwise needed due to, e.g., scratching or contamination with contrast media of the pressure jacket." (col. 9 lines 17-23) In these sentences, which are the only other uses of "content", "content" is being used to refer to the fluid in the syringe and its nature, not the amount of fluid. Notably, the dictionary definition cited by the Examiner recognizes the use of "contents" (annotated "~s") only with the first two meanings of "content" – not with the fourth definition which the Examiner has selected for his rejection.

Thus, referencing the specification of the '858 patent, as the Federal Circuit instructs, it is apparent that "content" is consistently used to refer to the nature or type of fluid in a syringe, not its volume or capacity as the Examiner supposes.

Notably, "content" is used to refer to the fluid in a syringe and not its volume, in patents issued from divisional applications of the '858 patent, such as U.S. Patent 5,997,502, 6,402,717 and 6,475,192. None of those other patents has included a claim that uses "content of the syringe" to refer to the volume of liquid in a syringe, nor do any have a claim that

recites that syringe volume or capacity information is obtained from an encoding device. Specifically, U.S. Patents 5,997,502 and 6,402,717 include claims that recite that the "syringe information" obtained from a syringe is "liquid media information" (e.g., see claims 7, 13, 33 of '502 and claims 4, 14 of '717), i.e., it relates to the nature or type of liquid media. Similarly, U.S. Patent 6,475,192 includes claims that recite that the "syringe information" obtained from a syringe is "contents of the syringe" (see claim 14) or "liquid media information" (see claim 20). (Here again, note the use of the plural form of "contents", which is not recognized in the Examiner's chosen meaning in the Examiner's dictionary.) U.S. Patent 6,733,478 is similar, see claims 4 and 11.

Applicant thus submits that the Examiner's interpretation of "content" using a dictionary is inappropriate under governing law, and the interpretation chosen is inconsistent with other uses in the '858 patent as well as with other related patents. The Examiner's rejection based on Reilly '858 must therefore be reversed.

2. The "indicating mechanism" 76 in Reilly '858

The Examiner's Answer references the "indicating mechanism" 76 shown in Reilly '858 (Fig. 6) and asserts, wrongly, that it is "indicia [which] indicates the presence of liquid, and thereby indicates a volume of liquid present in the syringe."

The Examiner is clearly incorrect regarding the function of the "indicating mechanism" 76. As explained by Reilly's specification at col. 7, lines 11-23:

> With reference to FIG. 6, the tubular body 32 of the syringe 22 also may be provided with an indicating mechanism 76 for readily detecting the presence or absence of a liquid contrast media in the syringe. In this instance, the detecting

> mechanism 76 includes a plurality of integrally molded, textured dots 78 on the syringe 22, which provide a visual indication of whether the syringe contains liquid or air. More specifically, as illustrated in FIGS. 6 and 7, when viewed against an air background (FIG. 7), the dots 78 appear oval-shaped, but when viewed against a liquid contrast media background (FIG. 6), which has a different index of refraction than air, the dots 78 appear circular.

As this text makes clear, the textured dots 78 have the purpose of creating a visual indication of whether the syringe contains fluid or air. They do not, as the Examiner asserts, indicate the capacity of the syringe, only whether there is liquid in the syringe at the location of the dot 78 in question. Moreover, and more directly to the point, these dots are not "indicia" as recited by the present claims for the reason that the clearly do not indicate any of the information about a syringe that is identified by the present claims, namely, "capacity of said syringe" (claim 22), "distance of the plunger from an end of said syringe when said syringe is initially installed on an injector" (claim 24), "information related to the amount of fluid pre-filled in the pre-filled syringe" (claim 26), an "end of travel position of an injector ram coupled to the plunger when the syringe is coupled to an injector" (claim 28), and the "range of travel of an injector ram coupled to the plunger when the syringe is coupled to an injector" (claim 30).

The Examiner appears to have confused the "indicating mechanism" 76 shown in Figs. 6 and 7 with the "encoding device" 70 shown in Fig. 2 and discussed in col. 6 of Reilly '858. If so, this clarification establishes that the "indicating mechanism" is not relevant to the present claims and does not embody the claimed information. In any event, the Examiner's rejection on this ground must be reversed.

3. "Dimensions of the syringe" in Reilly '858

The Examiner has inappropriately used the text at col. 6, lines 45- 47 of Reilly '858, for the proposition that "the indicia could include dimension[s] of the syringe ... from which content of the syringe is determined." The text cited by the Examiner states only that the "encoding device" could encode "dimensions of the syringe" – it does not state which "dimensions" and more specifically nowhere states the use of the "dimensions" to compute volume or capacity, as the Examiner has supposed. Indeed, "dimensions" can refer to many aspects of a syringe that have no relation to capacity, such as syringe wall thickness – which would relate to the maximum flow rate or pressure to be used with the syringe, as is mentioned in the immediately following text in col. 6 of Reilly '858. But, wall thickness and other "dimensions" would not have any necessary relation to capacity or volume of a syringe. Supposing this is true is merely hindsight from the present claims.

Thus, the Examiner is clearly incorrect in his supposition that encoding "dimensions of the syringe" would inherently lead to any computation of syringe volume or capacity, or suggest the same.

4. Fenton '260

Fenton's use of "the position of the connector, as well as the size of the syringe to determine the rate of the plunger travel" is clearly not relevant to the claimed invention. A connector that is mounted in different ways when it is used with different syringes is not "indicia" that is "on a syringe" and "indicate[s] information" on the "capacity" of the syringe, much less the other information recited in the rejected claims. In the first instance, the

connector is not part of the syringe, and furthermore, the connector does not "indicat[e] information" about the syringe since the connector itself is unchanged from one syringe to another. The positioning of the connector and the size of the syringe itself are not "indicia" which "indicate information", since they are the physical characteristics of the syringe itself. Accordingly, the Examiner's rejections based on Fenton '260 are faulty and must be reversed.

5. Hyde '175

Finally, the Examiner's assertion that "Hyde '175 discloses that the volume of a syringe is indicated via communication with physical indicia on a syringe" is totally incorrect. The Examiner is citing text at col. 5 lines 9-11 of Hyde, which describes a spur gear 42 within a drive mechanism of the Hyde device, and a switch which counts the movements of the spur gear so as to determine the volume delivered. In the first instance, the spur gear 42 that the Examiner is citing is not part of the syringe or related to it – it is part of the drive mechanism that moves the plunger. Furthermore, the spur gear / switch mechanism relied upon does not provide information on the volume or capacity of the syringe, or the other information recited in the claims, it simply identifies when the plunger has been moved. The cited portion of Hyde is thus clearly irrelevant.

Conclusion

In view of the foregoing, Applicant submits that the Examiner's rejection is in error and a reversal of the rejection and allowance of the claims is therefore requested.

Respectfully submitted,
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